UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,307	06/12/2001	Arturo A. Rodriguez	A-7041	3285

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EXAMINER
PARSONS, CHARLES E

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/879,307	RODRIGUEZ, ARTURO A.
	Examiner	Art Unit
	Charles E Parsons	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-31*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   Claims 1-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While the resource constraints are defined in the specification, the specification does not teach how the modes are determined, nor does it teach what particular device or section of the decoder does the determining.

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As for claims 22 and 23, there is no support in the specification for these limitations. Nowhere is a look-up table or a history file mentioned in the specification.

As best understood by the Examiner a constraint mode is a prioitization mode. I.E priority is given to any component that may be undergoing a particular constraint, for example memory overload, inadequate bus capabilities, or CPU inadequacies.

Claim Objections

3.   Claims 10-12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 10-12 depend from claim 16 which is not a previous claim.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1-4, 6, 17, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu.

Claim 1, 29: A method in a video decoding system for adapting to resource constraints, said

method comprising steps of:

determining whether a resource constrained mode is to be initiated; and (See Wu

column 5 lines 4-16.)

responsive to determining that the resource constrained mode is to be initiated, initiating

the resource constrained mode, including modifying a resource access priority. (See Wu

figure 3 as well as column 8 lines 28-51.)

Claim 2: The method of claim 1, wherein the resource access priority is a priority that a

component is assigned for accessing a data bus. (See Wu column 8 lines 45-49)

Claim 3: The method of claim 2, wherein the component is selected from a group consisting of: a

processor, a video decoder, an audio decoder, a video digital encoder, a memory buffer,

a data storage device, and a digital to analog converter. (See Wu column 4 line 55

through column 5 line 3 as well as column 3 lines 49-61 implying the A\D converter.)

Claim 4: The method of claim 1, wherein the resource access priority is a priority that a

component is assigned for accessing a data bus while performing a specific function.

(See figure 3.)

Claim 6: The method of claim 1, wherein the resource access priority is a priority that a

component is assigned for accessing a data storage device. (See column 8 lines 12-24.)

Claim 17: The method of claim I, wherein the received video input is encoded using a Motion

Picture Experts Group (MPEG) encoding scheme. (See Wu abstract.)

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claim 5, 7, 18-21, 24, 25, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wu as applied to claim 1 above, and further in view of MacInnis.

8.

Claim 5. The method of claim 4, wherein the specific function is selected from a group consisting

of:

writing data to a compressed audio buffer, writing data to a compressed video buffer,

reading data from a compressed audio buffer, reading data from a compressed video

buffer, writing data to a video picture buffer, writing data to a graphical data buffer,

reading data from a graphical data buffer, writing data to an alpha-blend plane buffer,

writing data to an off-screen buffer, writing data to an audio buffer, reading data from an

audio buffer, reading data from an off-screen buffer, and reading data from an alpha-

blend plane. (While Wu is not specific about how he responds to inadequate constraints,

MacInnis is, see MacInnis column 56 lines 14-30 as well as figure 40 wherein he has his

components performing these functions attached to a common bus.. At the time the

invention was made it was well known in the art that, as taught by Wu and MacInnis,

when a bus is shared amongst different components, each component must have a priority assigned to it. When memory resources are called upon for multiple tasks, the tasks must be prioritized, therefore it would have been obvious to one of ordinary skill in the art, to initiate a prioritization scheme to efficiently deal with resources when multiple tasks are implemented simultaneously.)

Claim 7, 30: The method of claim 1, wherein the determining step includes determining that the resource constrained mode is to be initiated responsive to inadequate memory availability. (While Wu is not specific about how he responds to inadequate memory constraints, he assigns priority to particular components to the memory bus, MacInnis is, See MacInnis column 56 lines 14-30. At the time the invention was made it was well known in the art that, as taught by Wu, when memory resources are shared amongst different components, each component must have a priority assigned to it. When memory resources are inadequate for multiple tasks, the tasks must be prioritized, therefore it would have been obvious to one of ordinary skill in the art, to initiate a prioritization scheme to efficiently deal with memory resources when multiple tasks are implemented simultaneously.)

Claim 8, 31: The method of claim 1, wherein the determining step includes determining that the resource constrained mode is to be initiated responsive to inadequate bus bandwidth availability. (At the time the invention was made it was well known in the art that when bus bandwidth availability is inadequate a priority level must be assigned to each task requesting a bus transfer. Therefore it would have been obvious to one of ordinary skill in the art to initiate a constrained mode for prioritizing bus transfers, much like a DMA access controller.) Official notice served

Claim 18: The method of claim 1, wherein the modification in resource access priority is responsive to a degree of resource constraint. (See Wu column 8 lines 40-52 wherein he teaches dynamic priority allocation depending on the resources required by the task at hand.)

19. The method of claim 18, wherein the degree of resource constraint is determined in view of an amount of resource availability and an amount of additional resource needed. (at the time the invention was made it was well known that resource constraints are related to the resources available.) Official notice served

20. The method of claim 19, wherein the resource constraint includes memory constraint. (While Wu is not specific about how he responds to inadequate memory constraints, he assigns priority to particular components to the memory bus, MacInnis is, See MacInnis column 56 lines 14-30. At the time the invention was made it was well known in the art that, as taught by Wu, when memory resources are shared amongst different components, each component must have a priority assigned to it. When memory resources are inadequate for multiple tasks, the tasks must be prioritized, therefore it would have been obvious to one of ordinary skill in the art, to initiate a prioritization scheme to efficiently deal with memory resources when multiple tasks are implemented simultaneously.)

21. The method of claim 19, wherein the resource constraint includes bus bandwidth constraint. (At the time the invention was made it was well known in the art that when bus bandwidth availability is inadequate a priority level must be assigned to each task requesting a bus transfer. Therefore it would have been obvious to one of ordinary skill in the art to initiate a constrained mode for prioritizing bus transfers, much like a DMA access controller.) Official notice served

24. The method of claim 19, wherein a function for which resource access priority is modified is also based upon degree of resource constraint.

25. The method of claim 19, wherein a component for which resource access priority is modified is also based upon degree of resource constraint.

9.   Claims 9-16, 18, 19, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu as applied to claim 1 above, and further in view of Coleman.

Claim 9: The method of claim 1, wherein the determining step includes determining that the resource constrained mode is to be initiated responsive to user interaction. (At the time the invention was made it was well that user interaction would constrain system functions. Therefore it would have been obvious to implement a constrained mode and prioritize the action taken by the user See Coleman figure 2 as well as column 14 lines 8-21. Note that the memory manager responds to user interaction and memory constraints.

Claim 16, 13 The method of claim 1, wherein the determining step includes determining that the resource constrained mode should be initiated responsive to receiving from a video transmitter data describing the received video input. See Coleman column 15 lines 51-63, any input will place some sort of constraint upon a system.

Claim 10: The method of claim 16, wherein the resource constrained mode is one of a plurality of resource constrained modes that can be initiated. (See Wu figure 3, a plurality of devices have different constraints placed upon them.)

Claim 11: The method of claim 16, wherein the user interaction includes causing the video

decoding system to reduce spatial resolution of video output. (See Coleman abstract

special resolution is reduced when the guide shares the screen with the video.)

Claim 12, 14, 15: The method of claim 16, wherein the user interaction includes causing graphics

to be

generated and output along with the video output. (See Coleman abstract.)

Claim 18, 24, 25: The method of claim 1, wherein the modification in resource access priority is

responsive to a degree of resource constraint. (See Wu column 8 lines 40-52 wherein he

teaches dynamic priority allocation depending on the resources required by the task and

component at hand.)

19. The method of claim 18, wherein the degree of resource constraint is determined in view of

an amount of resource availability and an amount of additional resource needed. (at the time the

invention was made it was well known that resource constraints are related to the

resources available.) Official notice served

26. The method of claim 1, wherein the determining and initiating steps are performed by

processor in a digital home communication terminal. (See Coleman abstract.)

27 The method of claim 1, wherein the initiating step includes continuing to present audio to a

user at a regular rate and maintaining audio and video synchronization during the resource

constrained mode. (See Coleman abstract.)

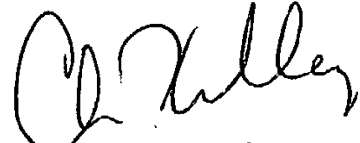28. The method of claim 1, further comprising a step of terminating the resource constrained

mode responsive to determining adequate resource availability. (Obviously if a resource is

constraint is not present then a constrain mode would not be necessary.)

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Charles E Parsons whose telephone number is 703-305-3862. The examiner can normally

be reached on M-TH 7AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this

application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free).

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